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**Thomas J. Faulkenberry\*** ([faulkenberry@tarleton.edu](mailto:faulkenberry@tarleton.edu)), Department of Psychological Sciences, Tarleton State University, Stephenville, TX 76401. *Closed form Bayes factor techniques for measuring evidential value from analysis of variance models.*

The analysis of variance is one of the most frequently used techniques for assessing group differences in experimental design. In a Bayesian framework, the goal of the analysis of variance is to assess the relative evidence between two competing models:  $\mathcal{H}_0$ , where all group means are equal, and  $\mathcal{H}_1$ , where at least one group mean is different from the others. In this talk, I will discuss recent work on developing methods for computing Bayes factors from analysis of variance summaries. The Bayes factor, defined as the ratio of marginal likelihoods for two competing models, represents the factor by which the prior odds for  $\mathcal{H}_1$  over  $\mathcal{H}_0$  is updated after observing data. Particularly, I will discuss a choice of prior distribution that yields Bayes factors with a simple closed form structure without integral representation. These results allow for a number of nice applications which I will discuss, including a web application that applied researchers can use to measure the evidential value of their own data. (Received September 13, 2019)